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ABSTRACT

The Project TALENT Data Base described in this paper provides a source of information on the personal characteristics, educational experiences, and subsequent career outcomes of a representative sample of 400,000 individuals who were in high school in 1960. (These data provide a basis for analysis and development of policies relating to the question of how schools can better prepare individuals to function effectively in adult society.) Illustrations in the following areas are provided of policy-related studies, both conducted and planned, based on TALENT data: How and how well are youth developing their abilities (changes in student performance over time, effectiveness of education in providing for individuals' needs, and contribution of education to adult knowledge), and what factors affect the utilization of individuals' abilities (contribution of post-high school education to career development, science career development in high school, determinants of physician career development, and factors influencing high achievement and the realization of high achievement potential). Plans for the future development of the project are briefly discussed. (TA)

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EDUCATION AND CAREER DEVELOPMENT:
AN EMPIRICAL BASIS FOR POLICY FORMULATION

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Education and Career Development: An Empirical Basis
for Policy Formulation

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American Institutes for Research

The Project TALENT Data Base provides an unequalled source of information on the personal characteristics, educational experiences, and subsequent career outcomes of a representative sample of 400,000 individuals who were in high school in 1960. These data provide a basis for analysis and development of policies relating to the question of how schools can better prepare individuals to function effectively in adult society. Illustrations are provided of policy-related studies, both conducted and planned, based on TALENT data.

EDUCATION AND CAREER DEVELOPMENT:
AN EMPIRICAL BASIS FOR POLICY FORMULATION¹

American society has from the start placed considerable value on individual achievement with a concomitant emphasis on the development and utilization of human talents. Moreover, talent is increasingly being viewed as a social resource as well as an individual asset. Rosen, Crockett, and Nunn (1969) observe that "a nation's survival in a competitive world may depend upon its ability to identify talent, encourage its development, and direct it into socially useful channels" (p. 11).

Since 1959, Project TALENT has been involved in investigating the development and utilization of human talents. A longitudinal study of over 400,000 Americans who were in high school in 1960, TALENT grew out of an awareness of the need for sound information about the processes by which men and women develop and use their abilities. TALENT was initially conceived as a means of developing a national inventory of human resources, achieving a better understanding of how young people choose and develop in their careers, and identifying the educational and life experiences which are most important in preparing individuals for their life work. Upon signing the initial contract for Project TALENT, then Commissioner of Education Laurence Derthick observed that

...Here, on an unprecedented scale, is an attempt to find out more about the students' interests, their career plans, and whether the courses they take are consistent with the life objectives they have set for themselves. And above all, it is an attempt to determine why so much of the nation's human potential is lost and what schools, counselors and parents can do to reduce this loss. (Flanagan, Dailey, Shaycoft, Gorham, Orr, & Goldberg, p. 1)

¹The work reported here is the result of the efforts of the following individuals: John Flanagan, Steven Jung, Darlene Russ-Eft, Wendy Yen, Don McLaughlin, Kevin Gilmartin, Lauress Wise, Robert Rossi, Sandra Wilson, and J. J. Card.

Today, because of the scope of its sample and the breadth and depth of data obtained in 1960 and in the periodic follow-ups since 1960, TALENT has become an unparalleled source of data concerning the accomplishments and life development of our nation's young adults--their personal and career development processes, their quality of life, and their backgrounds, abilities, and experiences in school and after. This paper will briefly review the general design and recent accomplishments of Project TALENT, including both completed projects and projects expected to get underway soon, and it will discuss how longitudinal data such as those compiled by TALENT can be utilized in developing and assessing educational and other social policies.

Project TALENT: An Overview

TALENT was developed as a longitudinal study of a representative sample of American youth. The original design called for the comprehensive assessment of students' characteristics while in high school (grades 9-12), with periodic follow-up surveys conducted 1, 5, 10, and 20 years following the expected year of graduation from high school. This design has been and is being implemented with only a few modifications, as shown in Table 1.

The 1960 Sample

Because a major emphasis in TALENT has been on exploring the processes by which people develop their talents and pursue careers, it was important that the initial data be collected from youth at about the time that they were making their first decisions regarding their future careers. Individuals typically make important career-related decisions during high school. For this reason, students in grades 9-12 in the spring of 1960 were chosen as the primary population to be studied. (These individuals now, in 1977, represent that portion of American adults in their early 30s.)

Table 1

Modal Age of Respondents in Relation to
TALENT Data Collection Schedule

Data Collection Date	Grade in 1960				Data Collection Effort
	12th	11th	10th	9th	
1960	17½	16½	15½	14½	Initial Testing
1961	19				
1962		19			
1963			19		
1964				19	1-Year Follow-Up
1965	23				
1966		23			
1967			23		
1968				23	5-Year Follow-Up
1969					
1970					
1971	29				
1972		29			11-Year Follow-Up
1973			29		
1974				29	
1975					
1976					17-Year Follow-Up
1977	35 ^b	34 ^a	33 ^a	32 ^a	
1978	36 ^c	35 ^c	34 ^b	33 ^b	
1979	37 ^d	36 ^d	35 ^d	34 ^c	
1980	38 ^d	37 ^d	36 ^d	35	

Note. All dates are for the Fall except the 1960 testing which was in the Spring.

^aControl samples of 1,000 cases to be followed up in 1977.

^bControl samples of 1,000 cases to be followed up in 1978.

^cControl samples of 1,000 cases to be followed up in 1979.

^dControl samples of 1,000 cases to be followed up in 1980.

The investigation of factors influencing individuals in their pursuit of specific careers required that the sample of students selected to participate in TALENT be (1) representative of the population as a whole and (2) large enough that the numbers of TALENT participants eventually pursuing various occupations (e.g., physicians, engineers, teachers) and engaging in

particular patterns of life development would be sufficient to support analyses of data for specific career groups. In order to achieve these goals, a probability sample designed to be representative of all U.S. high school students in grades 9-12 in 1960 was selected. First, a stratified random sample of all secondary schools in the U.S. was drawn. Stratification was based upon category of control (public, parochial, and private-nonparochial) and geographic location. Within public schools there was further stratification on the basis of student retention ratio and school size. The school probability sample consisted of 1,225 schools--987 senior high schools and 238 associated junior high schools--in which all students in grades 9-12 were tested, over 375,000 students in all. Through the use of the student case weights which have been developed to adjust for the differential sampling ratios, results can be obtained that are representative of all 1960 U.S. high school students, as well as of particular subpopulations such as females, students attending graduate school, or persons now in science occupations.

In addition to the schools in the probability sample, other schools participated, either by invitation for the purposes of some special substudy or by their own request.

The Measures Used in 1960

In the spring of 1960, all the TALENT participants (those in the supplementary samples as well as those in the probability sample) were given a two-day battery of tests and inventories. This battery was designed to provide baseline data on the aptitudes and abilities of these individuals, as well as to assess their interests and various personal characteristics. The data resulting from these tests and inventories are briefly outlined in Table 2.

Information was also collected on the characteristics of each of the

Table 2

Summary of Data Collected

1960	1961-1964	1965-1968	1971-1974
Information, language aptitude and ability, mathematics visualization, clerical and perceptual aptitude, and complex intellectual aptitude test--scores and derived scales	1 Year Follow-up (1 grade/year)-- Education--high school, general, post-high school non-college, college Career--current job, plans, history	5 Year Follow-up (1 grade/year)-- Education--high school, general, post-high school noncollege, college-general, college-4 year, graduate school, value of education Career--current job, plans, history Personal--spouse, children, values and quality of life, health, other activities (, race, religion)	11 Year Follow-up 1 (grade/year)-- Education--high school, general, post-high school noncollege, college-general, college-community, college-4 year, graduate school, value of education Career--current job, job satisfaction, plans, history Personal--spouse, children, values and quality of life, mobility, health, other activities (, race)
Student Activities Inventory (150 Items; 13 scales)	Personal--spouse, children, values and quality of life, other activities		
Interest Inventory (205 occupations and activities; 17 scales)			
Student Information Blank--biographical data (396 items) including activities and experiences; school program and study habits; parents' education and occupation; family members; finances; health; and plans for college, military service, marriage, and career. Includes derived scales such as SES index. ^a			
High School Questionnaires -- general school characteristics and guidance program (principal questionnaire); counselor's questionnaire			

^aCrucial high school characteristics are on individual student files; remainder are on school file.

schools in the TALENT sample. The General School Characteristics Questionnaire provided information about the programs, policies and staffing of the schools and data on the background of both the school and the community. A separate Guidance Program Questionnaire focused on the school's guidance personnel, services, and facilities.

Post-High School Follow-Up Surveys

As indicated in Table 1, TALENT participants have been followed up one, five, and eleven years after graduating from high school, and a seventeen-year follow-up survey is to begin next year. These follow-up surveys have been timed to occur at key points in individuals' personal and career development. The one- and five-year follow-ups focused on the years in which individuals begin to put their career choices into action, either through postsecondary education and training or through direct job experience. At the time of the eleven-year survey, most individuals had completed their formal education and had entered the labor force. In addition to asking about respondents' educational, work, and family experiences, this survey also explored their evaluation of, and satisfaction with, their careers to date and their general quality of life. The seventeen-year survey will examine individuals when they are well into their careers and can provide some indications of career attainment and progress, as well as their development in other important life areas, including lifelong learning, family roles, leisure and civic pursuits, and personal values and life style. It will also examine the experiences of many women returning to the labor force after taking time out for childrearing.

The information available from the 1960 testing and the major topics addressed in each of the three follow-up surveys conducted to date are summarized in Table 2. Although somewhat different questionnaires were used

for the different grade cohorts in each follow-up, each included a common core of items tapping information vital to the study of further education, jobs, and career plans, as appropriate for the particular life stage at which that follow-up was conducted.

These follow-up surveys have been conducted by mail. Response rates to the mail questionnaires have varied from over 60% for 1960 12th graders followed up one year after high school (1961) to about 20% for 1960 9th graders followed up 11 years after high school (1974). In general, response rates fell off slightly each year. To overcome the problem of nonresponse bias, special surveys of representative samples (generally about 2,500 individuals) of nonrespondents to each follow-up were conducted. Members of the special samples selected for intensive follow-up were located with the help of TALENT in-house staff and regional coordinators across the country and were contacted by telephone or in person to secure their answers to the questionnaire items.

Using TALENT Data in Policy-Related Research

A basic question underlying many educational policy decisions is how can educational and other social institutions contribute to the effective development and utilization of the talents of all citizens? Because the TALENT data bank contains information on the abilities and personal characteristics of the participants when in high school, their secondary and postsecondary educational experiences, and their subsequent life-career outcomes, it has been possible to draw on TALENT data to investigate various aspects of this basic research question. Several such studies are briefly described below, along with discussions of how each contributes to our understanding of the processes by which individuals develop and use their talents. These studies illustrate

both the kinds of issues that can be addressed with TALENT data and some of the ways that the TALENT data can be used to address such issues.

How and How Well are Youth Developing their Abilities?

The ongoing debate over the effectiveness of public education reflects an underlying concern that schools are not assisting youth to develop their skills as much as would be desired. Much public as well as professional attention has been given to the related questions of (1) are our students learning as much as they should and (2) are they learning what they need to attain a productive and satisfying life? Several studies based on TALENT data provide some insight on these issues.

1. Changes in student performance over time. Drawing on the wealth of data on the abilities of high school students in 1960, John Flanagan has conducted two studies comparing these results with similar data for high school students in 1960 and 1975 (Flanagan & Jung, 1971; Flanagan, 1976). In 1970 a stratified random sample of the TALENT high schools was drawn and all eleventh grade students in those schools were asked to complete the Reading Comprehension tests and an inventory of educational experiences and habits. The Reading Comprehension test was selected because of the emphasis given to reading instruction during the 60s and because this skill has been found an effective predictor of general school success. Comparisons between students in 1960 and 1970 revealed only slight changes in student performance.

- (1) There was a slight gain in reading comprehension abilities for both males and females from 1960 to 1970.
- (2) Students in 1970 reported spending somewhat less time studying than did students in 1960.
- (3) No change was revealed in numbers of books read by students in 1960 and 1970.
- (4) Students in 1970 had slightly higher rates of attendance than had students in 1960.

In 1975, as part of an effort to standardize a new guidance program developed by AIR, students in a smaller sample of the TALENT schools were given ten of the same ability tests used in 1960. Comparisons between students in 1960 and students in 1975 revealed more substantial changes, even after adjusting for changes in the socioeconomic composition of the school populations during the intervening years.

- (1) Performance on Vocabulary, English, Quantitative Reasoning (a test of problem-solving skills), and Computation tests dropped significantly for both men and women from 1960 to 1975. A slight drop was also found for the Reading Comprehension test. The Mathematics test (a test of knowledge of mathematical concepts), however, showed a small gain for men and women over this period.
- (2) Tests of Abstract Reasoning and Creativity showed considerable gains for both men and women between 1960 and 1975.
- (3) For the tests of Mechanical Reasoning and Visualization, women scored modest gains while men scored slight losses, although men's scores overall were still higher than women's scores on these measures.

The results of these comparative analyses indicate that while changes are occurring in students' performance, there are areas of growth as well as areas of decline. Clearly, further research is needed to determine why such changes are occurring and to what extent changes can be attributed to in-school vs. out-of-school activities (e.g., television). These results do indicate, however, that some progress is being made in reducing the sex stereotyping displayed by students' performance on some tests in 1960.

2. Effectiveness of education in providing for individuals' needs. As a means of assessing the adequacy and appropriateness of American education in meeting the needs of its citizens, Flanagan and Russ-Eft (1975) examined the relationships between individuals' educational experiences and their ratings of importance of and satisfaction with fifteen dimensions of quality of life. The study was based on a sample of 1000 TALENT participants, and the background and follow-up data on those individuals were augmented by a

three-hour interview exploring in depth their earlier (i.e., presecondary) and postsecondary educational experiences and their quality of life at age 30.

Analyses of the results focused both on the quality of life at age 30 of this sample and on the ways in which education contributed to (or detracted from) various aspects of these individuals' quality of life. The results obtained suggest that most of these individuals are satisfied with those aspects of quality of life they rate as most important. The areas rated most often as important or very important were health, spouse, job, children, developing a mature personal understanding of life, and intellectual development.

Preliminary analyses of the contribution of education to quality of life have revealed five major problem areas.

- (1) Vocational guidance was badly needed by these students and was rarely adequate.
- (2) The quality of teaching had an important effect on present quality of life. For males, the good and bad effects were about even; for females, the good effects were clearly predominant.
- (3) Individualized instruction (i.e., instruction designed to meet the academic needs of the individual student) is a major need throughout the nation.
- (4) The curriculum available is, in many instances, inappropriate and inadequate.
- (5) The need for personal support and counseling was expressed by many students, and few had been able to obtain such help.

In-depth analyses of the data on each of the 1,000 cases have been carried out by a panel of experts in educational planning. These analyses have examined specific problems relating to the five problem areas cited above and explored the needs of specific subgroups within the sample. The results of these studies, along with recommendations for improvements in the nation's educational programs, are to be published in book form soon.

3. Contribution of education to adult knowledge. A major goal of education--one might term it a part of the definition of "education"-- is that students should gain in knowledge or information about topics relevant to their life management and should increase their ability to acquire further knowledge in areas of importance to them. In an effort to ascertain to what extent this goal is being achieved, a study is planned that will determine the relations between individuals' formal education and other life experiences and the amount and nature of the knowledge they possess as adults.¹ This study will draw on the data already in hand on TALENT participants' characteristics and experiences and will augment these data with a special follow-up survey designed to test these participants' knowledge and knowledge-seeking skills as adults (at approximately age 32).

The primary task of the study will be to develop carefully and test a model of the personal and school characteristics and experiences that are presumed to relate to each other and to the outcome to be measured (adult knowledge). A generalized version of this model is presented in Figure 1. In the context of this model, one can test whether and to what extent various attributes of an individual which were measured in the 9th grade affect high school experience and college experience as well as ultimate knowledge level. The results of this study are expected to reveal areas of strength and weakness in terms of adult knowledge outcomes for both secondary and postsecondary education. Moreover, it is expected that there will be many implications for both the content and structure of continuing education.

¹This study is to be carried out jointly by TALENT staff, Christopher Jencks, and the National Opinion Research Center; the plans for this study are currently being reviewed by the National Institute of Education.

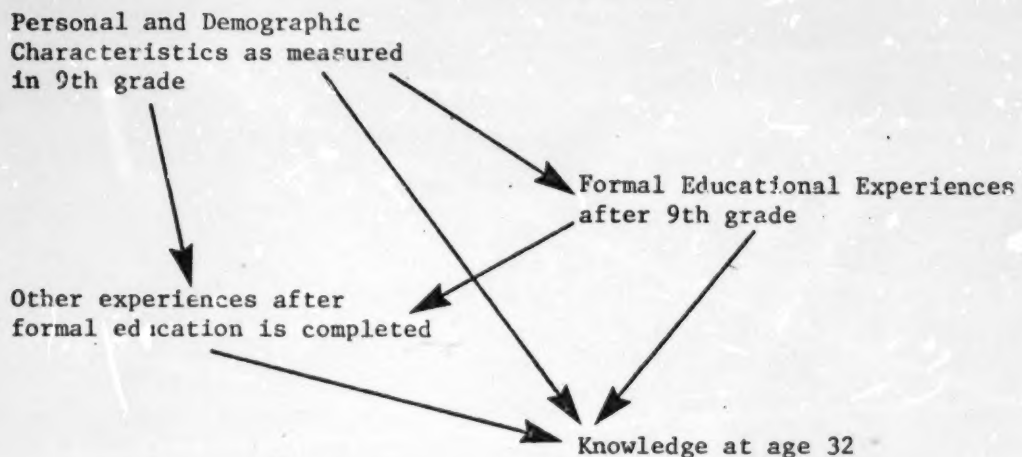


Figure 1. Generalized path model: Relationships among personal and school characteristics and knowledge at age 32

What Factors Affect the Utilization of Individuals' Abilities?

As a society, we must be concerned with the extent to which the members of the society--particularly those with high abilities--develop and use their abilities in order that necessary services such as education and health care be provided and that we continue to identify and develop strategies for coping with new challenges as they arise. Clearly education plays a major role in influencing how one eventually uses one's talents, but other background characteristics and life experiences can also be important. Several TALENT-related studies have been conducted, or are planned, that investigate how educational experiences contribute directly to various career outcomes and how they interact with other personal characteristics and experiences in influencing one's career development. A number of these studies and their policy implications are briefly reviewed below.

1. Contribution of post-high school education to career development.

Post-high school education is commonly viewed as a means of enhancing one's skills and career potential. For low SES and nonwhite Americans, it is also believed to be an effective means of moving up the socioeconomic ladder. These views derive from the fact that men and women with college degrees are generally paid more than those lacking college education. In an effort to determine more precisely how postsecondary education contributes to the development of individuals' potential, Yen and McLaughlin (1974) examined the effects of various levels of postsecondary education on subsequent salary, job satisfaction, and employment rate after controlling for the effects of academic aptitude and SES.

Their findings can be briefly summarized as follows. The relationships between SES and college completion were found to be extremely significant for men and women and for blacks and whites. The relationships between college attainment and career development were also significant. In particular, when SES and academic aptitude as measured in high school were controlled, the salaries and job satisfaction of four-year college graduates were higher than those of nongraduates, particularly among whites. The salaries of college dropouts were similar to the salaries of those who never attended college; however, among whites job satisfaction was lower for dropouts. Only for women was returning to four-year college and obtaining a degree after dropping out related to higher salaries than not returning. Completion of junior college and noncollege training programs was accompanied by higher salaries only among women. Employment rates were not consistently related to amount of post-high school education (Yen & McLaughlin, 1974, p. ix).

These results have several implications for educational policy. First, the strong relationship between SES and college attainment, even when controlling for academic aptitude, suggests greater effort is needed to influence

individuals' educational expectations in high school, or even earlier. While lack of financial support appears to be one factor contributing to lower educational attainment among high aptitude/low SES students, lack of motivation or interest in attending college is also an important influence on college attainment. A second important implication derives from the relations between college completion and job satisfaction and earnings: apparently little is gained by entering college if one doesn't remain and obtain a degree. A third important implication concerns the differential returns to education for men and women. Women were more likely than men to benefit (in terms of higher earnings) from returning to college and obtaining a degree after once dropping out, and also from completing other kinds of postsecondary education, particularly junior college. Postsecondary education would thus appear to be especially important in developing the abilities of young women and in enhancing their utilization in a career. Further, it appears to be an effective means of reducing to some extent the gap between men's and women's career attainment.

2. Science career development in the high school years. In an effort to understand the processes by which students--particularly women and ethnic minorities--turn toward or away from science careers, Gilmartin, McLaughlin, Wise, & Rossi (1976) examined the processes of science career development among high school students. The rationale for this study was that there are career guidance factors that may be subject to intervention at the high school level, resulting in more successful development of careers in science.

TALENT data were used to analyze the characteristics of high school students who later successfully pursued scientific careers, in order to provide information of value to students today for making science career plans. To explore the career planning and information needs of students today, as well

as to identify factors operating as barriers that keep particular groups of students from pursuing science careers, a survey of 1100 high school students in California was also conducted in the Spring of 1975.

Some of the more interesting findings and their implications are summarized as follows. The project found that about one high school student in five in 1975 was planning a science career, approximately the same proportion as in 1960. Females in high school have developed the abilities necessary to establish a career in science to almost the same degree as have males, and now, as opposed to 15 years ago, almost as many high school females as males have science career plans. Blacks and Spanish surname students, on the other hand, do not appear to have developed the necessary abilities by high school, suggesting that interventions may be needed before and during high school to help them develop more fully the abilities requisite for science. More than half of the female 11th-grade TALENT participants who were in science occupations in 1972 did not have science career plans in high school in 1960. This suggests that the science career development of women is more dependent on post-high school factors than for men. Further research is needed to determine how they do get into science careers and what influences their choices. Science career guidance in the high schools can clearly be improved by making more information available to the students about themselves, about careers, and about the career development process (Gilmartin et al, 1976).

3. Determinants of physician career development. The provision of adequate medical care in our country is hampered by the maldistribution of physicians, both with regard to area of specialty and to geographical location of practice, and by inadequate participation in the profession by women and minorities. A study is planned to investigate the relative influences of early characteristics, high school experiences, college, and medical training experiences on subsequent practice patterns (Wilson and Wise, 1977). All

indications are that many of the important attributes, aspirations, and abilities which determine career outcomes are developed early in life and that the high school period is a critical one due to the need to make decisions related to college preparatory study and college entrance. Many women and numbers of minority groups are almost certainly lost to medicine in this period, even without considering bias in the medical school admissions process--the common focus of attention on improving access to the medical profession. Similarly, there is evidence that the characteristics which determine a preference for clinical practice vs. research, rural practice vs. urban, and so on are relatively stable personal characteristics and may not be sufficiently modifiable by the years spent in professional medical training, by "role models," or by incentives operating in medical practice, as is assumed by many of the attempts which have been made to influence geographic and specialty distribution.

The research will focus on approximately 10,000 members of the TALENT sample including 2,400 who had applied to medical school between 1964 and 1968. Of the 2,400 applicants, approximately 1,400 enrolled in medical school and approximately 1,300 graduated. The data on the TALENT participants will be supplemented by data from the AMA Physician Masterfile on the medical education and present medical practice characteristics of the TALENT physicians. Analyses of these data will focus on (1) developing a decision tree for medical career development, (2) developing profiles of the characteristics of individuals who diverge at each point in the decision tree, and (3) developing indices of career outcome potential (e.g., the probability that an individual with certain characteristics would enter rural practice, enter a particular specialty, etc.).

The results of these analyses are expected to be of considerable value to medical school admissions officers and program planners, as well as to

individuals considering a medical career. Recommendations for strategies for improving the distribution of physicians and relieving the health manpower shortage will be developed and included as part of the final report.

4. Factors influencing high achievement and the realization of high achievement potential. Concern regarding the underutilization of women in our society has reinforced the importance of knowledge about the factors contributing to high achievement among men and women. Card (1977) plans to use TALENT data to document the determinants of high achievement and the consequences of high achievement potential in the U.S.¹ Special attention is to be paid to sex differences in these determinants and consequences.

The study will draw on the original 1960 TALENT data as well as data from the three follow-ups conducted to date. The objectives of the study are to:

- (1) Paint the early (ages 15-18) demographic, cognitive, and socio-psychological characteristics of high-achieving (at age 30) men and women, in contrast to their peers;
- (2) Trace the marital, childbearing, educational, and occupational development of these high-achieving men and women, again in contrast to their peers;
- (3) Chart the marital, childbearing, educational, and occupational development, at approximately ages 19, 24, and 30, of men and women with high achievement potential in high school, in contrast to their peers;
- (4) Document the background and the family, education, and work-related experiences of that subgroup of individuals with high achievement potential in high school who failed to become high achievers as young adults.

All analyses will be performed separately for males and females. In addition, because of the scope of the TALENT sample, it will be possible to study the

¹This study has been approved for support, pending the availability of funds.

determinants and consequences for various other subgroups, such as blacks vs. whites, married individuals vs. single individuals, people in rural areas vs. people in urban areas, etc.

The results of this study are expected to be of particular value for educational policymakers, program developers and guidance personnel who are concerned about enhancing the utilization of men's and, especially, women's talents. They will also have implications for employers, and should help individuals in their career and life planning.

Plans for Future Development of Project TALENT

With the completion of the eleven-year follow-up it has been possible to initiate several studies of individual's development during the late teens and twenties. Some of the studies developed by TALENT staff have been outlined above. Many others have been and are being conducted by outside researchers through the Project TALENT Data Bank. It was recognized in the early planning phases of TALENT that the data base resulting from this study would be of considerable value to future researchers in a variety of disciplines, and that its value would increase with each new installment of data. The TALENT data base now contains over a billion bytes of data on the individuals tested in 1960. The purpose of the Project TALENT Data Bank is to make this large mass of data available to the general research community.

Several kinds of services are available to researchers through the Project TALENT Data Bank, ranging from the generation of specific statistics to designing and conducting complete studies of interest to a particular individual or organization. The Data Bank Director, Dr. Donald McLaughlin, is available to confer with interested researchers regarding the suitability of TALENT data for their research needs. Such consultation is usually helpful

in designing a Data Bank project and in specifying the variables to be examined and the analyses to be performed. Given a detailed description of a researcher's project, including the variables and analyses of interest, the TALENT staff will carry out the analyses and supply the researcher with computer printouts or output tapes of the results of the analyses.

A second major activity for TALENT during the next few years will be the planning and carrying out of the 17-year follow-up of TALENT participants. This survey will focus on these individuals' development as adults and the experiences that enhance their potential for achieving meaningful and productive lives. The study of major events in the lives of the TALENT participants during their early 30s will yield long-term outcome measures against which the effects of earlier experiences may be assessed. A primary question to be addressed in this survey is to what extent the participants' early and continuing educational experiences helped them or failed to help them in the development of their more important adult roles.

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